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ABSTRACT

Noting that 48 percent of American households with children ages 8 to 17 years connect to the Internet, this study compared children's and parents' attitudes regarding the use of the Internet, focusing on the above population. Participating in telephone interviews was a nationwide cross section of 1,001 parents of children ages 8 to 17 in homes with Internet connections, and 304 children ages 10 to 17 years (half selected from the same households as the above parents). Findings revealed that parents and children were of different minds regarding giving personal information to Web sites. Ten- to 17-year-olds were much more likely than parents to say it was alright to give sensitive personal and family information to commercial Web sites in exchange for free gifts. Almost half of parents were not aware that Web sites gathered information on users without users' awareness. Sixty-one percent of parents said they were more concerned about 13- to 17-year-olds than they were about younger children revealing sensitive information to marketers. Although 69 percent of parents and 66 percent of children said that they have had discussions about what kind of information to reveal to Web sites, 41 percent of parents and 36 percent of 10- to 17-year-olds reported incidents of disagreement, worry, or anger over children's release of information on the Web. A small portion of parents believed in the Web's power to help their children grow. Parents were evenly divided on whether the Web would powerfully harm young minds. (KB)

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The Internet and the Family 2000
The View from Parents
The View from Kids

By Joseph Turow
Lilach Nir

May 2000

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The Internet and the Family 2000:
The View from Parents
The View from Kids

Overview 4
The Study and the Population 6
Attitudes of Online Parents Toward the Web, 2000 vs. 1998 12
Families and Information Privacy on the Web 15
Comparing Kids and Parents on Information Privacy 26
Concluding Remarks 34

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FOREWORD

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Kathleen Hall Jamieson
Director

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Rebecca Dudley and Cindy Gold provided assistance to this project.

CAPSULE OF FINDINGS:

American parents and youngsters are often of very different minds when it comes to giving personal information to Web sites. Kids' release of information to the Web could well become a new arena for family discord.

OVERVIEW

American parents and youngsters are often of very different minds when it comes to giving personal information to Web sites. Kids' release of information to the Web could well become a new arena for family discord.

- American 10-17 year olds are much more likely than parents to say it is OK to give sensitive personal and family information to commercial Web sites in exchange for a free gift. Examples of such information include their allowance, the names of their parents' favorite stores, what their parents do on weekends, and how many days of work their parents have missed.
- 41% of online parents with kids ages 8-17 and 36% of youngsters aged 10-17 report having experienced incidents of disagreement, worry or anger in their family over kids' release of information to the Web.
- Almost half of US parents are not aware that Web sites gather information on users without their knowing it.
- 61% of parents say they are more concerned about 13 to 17-year olds than they are about younger children revealing sensitive information to marketers.
- It is wrong to think that simple discussions between parents and kids about what information to give to the Web can easily resolve these tensions. Fully 69% of parents and 66% of kids say they have had these sorts of discussions. But when we specifically interviewed pairs of parents and kids in the same family, we found that most didn't agree on whether these sorts of discussions had ever taken place.

These are highlights from a complex picture that we found in the second Annenberg National Survey on the Internet and the Family. The unprecedented comparison of the attitudes of youngsters and parents toward giving up family information to Web sites was conducted by a major national survey firm for the Annenberg Public Policy Center of the University of Pennsylvania. All the respondents belonged to households with at least one computer connected to the Web. 304 youngsters aged 10-17 and 1001 parents with at least one child between ages 8 to 17 were interviewed between January 13 and February 17, 2000.

One aim of this second survey was to track differences from last year's findings regarding what parents generally think and do about the Web. We found that more of them believe in the Web's power to help kids grow. In 2000, all but a small proportion of parents feel that the online world holds strong educational possibilities. Parents are rather evenly divided, though, on whether the Web will also powerfully harm young minds.

Our survey expanded into new territory in 2000 to focus on another topic of growing importance, family privacy and the Web. As teenagers have emerged as major users of the Web, commercial sites have increasingly been gleaning information from them for marketing purposes. We wanted to know whether parents and youngsters agree that releasing information to Web sites is a problem and, if so, whether they do anything about it.

The question ties into an issue that is currently the topic of much public policy discussion: the possibility that youngsters using the Web might give up information about themselves and their families to marketers that their parents would not want disclosed. On the Web, the smallest bits of information divulged by kids about their home life can be aggregated using increasingly sophisticated tracking tools. Web sites can bring the intelligence together to create detailed portraits of a family's lifestyle. Accurate or not, such portraits can profoundly influence how marketers, banks, insurance companies, government agencies and other organizations treat family members – what discounts they give them, what materials they send them, how much they communicate with them, and even whether they want to deal with them at all.

Congress responded to some of this concern about the leakage of family information when, in the 1998 Children's Online Privacy Protection Act, it ordered the Federal Trade Commission to regulate data collection on sites that target children under age 13. The Commission developed rules to ensure that Web sites get parents' permission before the sites request information from children under age 13 about themselves or their families. The FTC rules went into effect in April 2000.

Was Congress' decision to focus only on kids under 13 warranted, or should society expand the information disclosure debate to include youngsters 13 and over? We addressed the question in interviews with parents, teens, and tweens (a marketing term for 10-12 year olds). We created scenarios aimed at learning what the youngsters say would be OK for teens to reveal to Web marketers compared to what their parents say would be OK for teenagers to reveal. And we tried to understand whether those we interviewed are aware of the way Web sites track their visitors without them knowing it.

- We learned that 96% of US parents with children aged 8 to 17 believe that teenagers should have to get their parent's consent before giving information online.
- 62% of tweens and teens agree, including, curiously, more than half of the youngsters who are consistently willing to give up sensitive personal and family information.
- When faced with the scenario of a free gift, though, caution seems to go out the window for many of the kids.

The study explores the concerns parents have about teens' release of information to the Web and how parents deal with this challenge. In the final section of this report, we argue for a social policy that helps families establish clear norms for information privacy and regulates the extent to which Web sites aimed at tweens or teens can elicit information from them.

THE STUDY AND THE POPULATION

In the 2000 research, we repeated key questions from the late-1998 benchmark study "The Internet and the Family: the View from Parents, the View from the Press." We also added new questions that explored notions of privacy on the Internet among parents and children.

According to Roper Reports and the Current Population Survey (CPS) for 1999, 71% of households with kids 8-17 now have computers and 67% of those households connect to the Internet. In all, then, 48% of US households with kids 8-17 have online connections. This year we focused on this group. In last year's survey (conducted in November and December 1998) homes with computers but no Internet connections were also included as part of an effort to better understand why some parents choose to connect to the Internet and some did not. A second important difference in 2000 is that children 10-17 were also interviewed, providing the opportunity to compare and contrast parents' and childrens' visions of the Internet -- and the rising wave of concern over privacy and security issues.

Telephone interviews were conducted with a nationwide cross section of 1,001[1] parents of children 8-17 in homes with Internet connections. The Random Digit Dialing (RDD) sampling methodology was used to locate respondents. During the interviews parents were asked to answer questions while thinking about their child 8-17 that had the most recent birthday. When the child the parent had focused on during the interview was at least 10-17 years old, an attempt was made to also interview that child. When that child was not available, another child 10-17 in the household was interviewed. Approximately half of the 304[2] children 10-17 that were interviewed were selected from same households as the parents. The other half of the childrens' sample (for which parents were not interviewed) was located using the Random Digit Dialing (RDD) sampling methodology. All the interviews were conducted January 13 through February 17, 2000. Interviews with the adults averaged 20 minutes; the ones with the kids averaged 10 minutes.

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[1] The sampling error for percentages based on the entire sample of 1001 parents is approximately plus or minus 3.5 percentage points. The sampling error is larger for smaller subgroups within the sample.

[2] The sampling error for percentages based on the entire sample of 304 children is approximately plus or minus 5.6 percentage points. The sampling error is larger for smaller subgroups within the sample.

THE PARENTS AND YOUNGSTERS

For the half of the children's sample whose parents we did not interview, we decided to limit our requests for background information for reasons of time. We know that the youngsters are scattered randomly across U.S. area codes. We also know that the average age is 13½ and that 52% are girls, 48% boys.

Table 1: Characteristics of Parents with Children 8-17 and Online Computers at Home

	(N=1001) %
SEX	
Male	41
Female	59
AGE	
20-29	4
30-44	57
45-59	33
60 or older	6
RACE	
White	76
African American	6
White Hispanic	4
Black Hispanic	1
Asian	2
Native American	2
Other	3
No answer	5
MARITAL STATUS	
Married	79
EMPLOYMENT STATUS	
Employed	83
"Not employed" homemaker	10
"Not employed" student	2
Retired	2
Disabled	1
Unemployed	2
NUMBER OF CHILDREN, AGED 8-17	
One	46
Two	37
Three	12
Four or more	5

* When the numbers don't add up to 100% it is because of a rounding error.

We learned more about the parent population (and therefore about the 150 kids linked to them). As Tables 1 and 2 indicate, the majority of parents of children 10-17 with on-line connections at home are white and between 30 and 40 years old. Seven in 10 (69%) have at least some college education; 38% have college or graduate degrees. Income distribution is hard to assess because so many parents – 12% more than in our late 1998 study – refused to answer the question when it was presented toward the end of the interview. It may be that the interview's topic of information privacy sensitized many of the parents to a concern about divulging household income. Fortunately, the overwhelming majority of respondents were much more forthcoming in answering questions during the rest of the interview.

Table 2: Last Education Degree and Household Income of Parents With Children Aged 8-17 and Online Computers at Home

	(N=1001) %
LAST EDUCATION DEGREE	
Grade school or less	1
Some high school	3
High school graduate	25
Some college	25
College graduate	31
Post graduate	11
No answer	2
YEARLY INCOME	
Less than $30,000	9
$30,000 - $49,999	19
$50,000 - $74,999	23
$75,000 or more	24
No answer	26

* When the numbers don't add up to 100% it is because of a rounding error.

Table 3: Patterns of Internet Use, Children Age 10-17

	Total	Gender		Age	
		Boy	Girl	10-12	13-17
	(N=304)	(n=145)	(n=158)	(n=101)	(n=203)
Frequency of Internet use					
A lot	37	38	36	21	45*
Some	37	35	39	37	37
Not Much	19	21	17	29*	14
Not at all	7	7	7	12*	4
Don't Know/ Refused	0	0	1	2*	0
Specific Internet Usage					
Send/Receive Email?					
Yes	83	82	85	70	90*
No	17	19	15	30*	10
Visit Chat Rooms?					
Yes	43	40	46	32	49*
No	57	60	54	68*	51
Visit Web Sites?					
Yes	91	92	89	86	93*
No	9	8	11	14*	7
Play Online Games?					
Yes	32	43*	26	23	40*
No	66	57	74*	77*	61

* Means that the percentage difference is statistically significant from the percentages of the corresponding category in that variable (boys vs. girls, young vs. old children).

Table 3 shows that 37% of the youngsters in our study told us that they use the Web "a lot," while 37% said "some." Only 7% said that they don't go online at all. Boys and girls reported no difference in the use of the Web. Teenagers (aged 13-17) were substantially more likely than tweens (those aged 10-12) to say they use the Web a lot. Nevertheless, of the kids who don't go online at all, about half were teens and half tweens.

As the table shows, for virtually all the kids (91%) going online means visiting Web sites. Sending and receiving email is another hugely popular activity, with visiting chat rooms and playing games with other people online far less common. Older kids are much more likely than younger ones to participate in chat rooms and game-playing with others. Boys are more likely than girls to involve themselves in cooperative game-playing online.

Tables 4 and 5 present answers to the questions we asked the parents about online use. The majority of parents have had the Web at home for over a year. Only 6% of our respondents say they have never gone online. Three quarters of the ones who do go online say they use both email and the World Wide Web. Twenty-one percent say their Internet use is limited to email.

Table 4: Patterns of Online Use, Parents of Children 8-17

	(N=1001)*
	%
PERCENTAGE ON THE INTERNET	
E-mail only	21
Other Internet (with or without e-mail)	74
Neither	6
ABILITY TO GO ONLINE OR NAVIGATE THE INTERNET	
A beginner	24
An intermediate user	42
An advanced user	22
An expert user	8
Don't know	4
LENGTH OF ONLINE CONNECTION AT HOME	
Less than six months	15
Between six months and a year	18
More than a year, but less than two years	21
More than two years	46
Don't Know	0

* When the numbers don't add up to 100% it is because of a rounding error

Table 5: Frequency of Web Use, for Parents of Children 8-17, Late 1998 vs. 2000

	1998 (N=676) %	2000 (N=1001) %
FREQUENCY OF GOING ONLINE IN THE PAST MONTH FROM WORK		
Every day	26	30
Every other day	7	7
Every few days	8	8
A few times	11	7
One or two days	6	5
Don't know	-	1
None	40	42
FREQUENCY OF GOING ONLINE IN THE PAST MONTH FROM HOME		
Every day	30	37
Every other day	15	17
Every few days	21	18
A few times	17	12
One or two days	12	6
Don't know	-	-
None	4	10
FREQUENCY OF GOING ONLINE IN THE PAST MONTH FROM OTHER PLACES		
Every day	3	3
Every other day	1	2
Every few days	4	3
A few times	5	7
One or two days	7	5
Don't know	-	1
None	79	79

One quarter of the parents who go online consider themselves beginners, 44% see themselves as intermediates, and 31% view themselves as advanced or expert users. These percentages are almost exactly the same as the ones we found last year.

For parents in Web households, home rather than work is the place in which they report most of their online activity taking place. As Table 5 indicates, fully 42% of our respondents said they have not gone online at all from work in the past month. Moreover, while 78% say they go online at home at least every few days, a smaller 45% say they go online from work that frequently. Table 5 shows that compared to last year, parent online use is up somewhat both at work and home.

ATTITUDES OF ONLINE PARENTS TOWARD THE WEB, 2000 VS. 1998

One aim of our 2000 survey was to track differences from last year's findings regarding what parents generally think and do about the Web. We presented parents with 15 of the most illuminating statements from last year about the potential benefits and harms of the Internet for children. We asked them how much they agreed or disagreed with each of the assertions along a five-point scale, from agree strongly to disagree strongly.

Table 6: Percentage of Online Parents Who Agreed "Strongly" or "Somewhat" with statements about the Internet (Late 1998 vs. 2000)

	1998 (N=676) %	2000 (N=1000) %
Access to the Internet helps my children with their schoolwork.	84	89*
Online, my children discover fascinating useful things they never heard of before.	81	85*
Children who do not have Internet access are at a disadvantage compared to their peers who do have Internet access.	68	74*
I am concerned that my child/children give out personal information about themselves when visiting Web sites or chat rooms.	77	74
I am concerned my child/children might view sexually explicit images on the Internet.	76	72*
The Internet can help my children learn about diversity and tolerance.	60	66*
People worry too much that adults will take advantage of children on the Internet.	57	59
Going online too often might lead children to become isolated from other people.	60	59
The Internet is a safe place for my children to spend time.	40	51*
Families who spend a lot of time online talk to each other less than they otherwise would.	48	50
My children's exposure to the Internet might interfere with the values and beliefs I want to teach them.	42	43
Children who spend too much time on the Internet develop anti-social behavior.	40	41
I often worry that I won't be able to explore the web with my children as well as other parents do.	21	26

* Indicates that the difference between responses of online parents in 2000 and in late 1998 is statistically significant.

As Table 6 indicates, we found a remarkable continuity in the belief that the Internet is a useful and even critical component of a child's education while at the same time it gives youngsters access to content with troublesome values. The one fairly substantial jump in agreement related to parents' view of the overall safety of the Web. While 40% agreed in late 1998 that "the Internet is a safe place to spend time," a majority - 51% - agreed in the 2000 survey. Otherwise, the percentages of parents agreeing with the positive statements rose slightly while the percentages agreeing with negative statements regarding the Web remained the same.

- The statement that most parents agreed with in both 2000 and 1998 was that "access to the Internet at home helps my children with their schoolwork": 89% agreed with this in 2000, compared to 84% in late 1998.
- Number two on the list is parents' agreement that "online, my children discover fascinating things they have never heard of before": 86% of parents agreed somewhat or strongly with this statement in 2000, compared to 81% a year earlier.
- Seventy-four percent of parents in 2000 agree that "children who do not have Internet access are at a disadvantage" compared to 68% in late 1998.

This assessment that the Internet is not an interesting luxury but a near necessity is undercut, however, by concerns. For example:

- About seven in 10 parents (71%) in 2000 agree with the statement "I am concerned that my children might view sexually explicit images on the Internet." Seventy-six percent agreed with this in 1998.
- 51% (compared to 48%) agreed that "families who spend a lot of time online talk to each other less than they otherwise would."
- Sixty-two percent of parents agreed with the new statement this year "I am concerned that my children might view violent images on the Internet."

The Parents' Web Attitude Clusters

Last year, we used a statistical technique known as cluster analysis to group parents in on-line households according to their attitudes about the Internet. Three groups of parents emerged:

- **The Online Worriers** - parents who are most concerned about bad effects that the Internet might have on their children and their families, though they also see the Web's positive qualities.
- **The Disenchanteds** - on-line parents who are not convinced about the Internet's educational value for their children even as they are concerned about its negative consequences.
- **The Gung Ho** - on-line parents who are highly positive about the Web and reject assertions about the negative effects of the Internet.

In 2000 we attempted to see whether and to what extent these groups of online parents still exist.[3] We found that they do, in percentages quite similar to those we saw last year, as the box below notes.

	Online Worrier	Disenchanted	Gung Ho
Jan-Feb 2000	40%	16%	43%
Nov-Dec 1998	39%	22%	39%

Comparing 2000 and 1998, we see a stable proportion of on-line worriers who are concerned about the negative social effects of Internet use. We see fewer disenchanted parents who are skeptical about the real benefits the Internet can bring for children. And we see a very slight increase in the proportion of gung ho parents, the ones who reject many concerns about the Internet.

Last year we noted that gung ho parents tended to have had an online connection longer than other online parents. We noted the same relationship this year, though the association was not as strong. The tendency for people who remain online for more than two years to stay positive (or develop positive inclinations) toward the Web would suggest that the stable percentage of online worriers is to some extent being replenished by newcomers.

The decline in the percentage of disenchanted parents suggests that relatively few people with youngsters discount the potential positive power of the Web for kids. Parents' thinking about the Web appears to be dividing along two views on its role in society. Both gung ho's and online worriers believe in the online world's strong educational possibilities, while online worriers insist the Web can also powerfully harm young minds.

[3] A discriminant analysis was performed using the 1998 three-group online segmentation as the dependent variable; items which were used to derive the 1998 segmentation (also asked in the 2000 study) were used as independent variables. Classification rates were quite good (90% of respondents belonging to group 1 were correctly classified, 89% for group 2, 87% for group 3) with an overall cross-validated correct classification rate of 89%. The classification function coefficients were used to create an algorithm (a weighted formula) with which to classify respondents of the 2000 study into the online segments.

FAMILIES AND INFORMATION PRIVACY ON THE WEB

We move now to the new topic that we addressed in the 2000 survey: the attitudes of parents and children in online households toward giving up information to Web sites. One major question we had was whether the attitudes parents hold generally toward the Web – for example, whether they are online worriers, disenchanteds or gung ho's – are reflected directly in the attitudes they hold to information privacy in the digital domain. Or, we wondered, do parents see information privacy separately from the way they see the Web as a whole because of a special concern that their children might release sensitive family information?

We also wanted to know whether American parents and children 10-17 are similar or different in the ways that they think about family privacy and report their interactions around it.

BACKGROUND: THE WEB'S INTEREST IN TEENS' INFORMATION

Our interest in comparing parents and youngsters in this age group grew out of awareness that commercial sites have increasingly been pursuing teens. As an article in *Forbes Digital Tool* noted, "the disposable income and tech-friendly instincts of teenagers have made [this segment] the hottest target for revenue generation among web companies."[4] "There's a 'frenzy over teens,' agreed Dan Pelson, chief executive of Bolt Media Inc., a Web "community" for teenagers.[5]

Like commercial sites aimed at adults, teen-oriented commercial domains gather information about their visitors for advertising, market research and electronic commerce. They use visitor data to attract sponsors who will pay for *banners* and other ads on the site to reach such individuals. Sites also sell information to marketers who need to know about the interests and habits of people whose profiles fit the visitors to the site. In addition, sites use the information themselves to help them sell products or services directly to their visitors. (Teenagers can purchase online by using their own bank cards, their parents' credit cards or money pre-deposited through *digital wallets* that some online retailers have instituted.)

Information about visitors can be gathered on the Web in basically two ways. One is by requesting data from visitors when (and if) they register to use the site. The other is by tracking what users

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[4] Regina Joseph, "It's time for handheld wireless devices. CollegeClub.com wants to offer gadgets to... our kids. They won't help Johnny's grades, but they sure are cool." *Forbes Digital Tool* (www.forbes.com), May 07, 1999.

[5] Roger O. Crockett, "Forget the Mall. Kids Shop the Net. Soon they'll spend billions online. How should marketers and parents respond?" Business Week, July 26, 1999, p. EB 14.

do on a site. To track, Web sites place tags, called *cookies*, on the visitor's computer disk drive. Cookies can note how often (and when) a visitor comes to a site and where the visitor clicks the mouse when there. The Web site can retrieve this *clickstream* information for an analysis called *digital profiling*. The profiling can merge information from the online registration and clickstream as well as from other information gleaned from the visitors – for example e-mails. Merchandising sites have been active in merging online data they have about their customers with "offline" (sometimes called *legacy*) data they have developed about them through such activities as telephone inquiries and credit card purchases.

To allay consumers' concerns that Web sites are selling far and wide what they know about individuals, many Web sites post privacy policies that attempt to assure their users. The standard approach is to promise that the information will not be shared or sold to others in ways that allow an association of the individual's name with the data. A careful reading of many Web-site privacy policies, however, will reveal a number of important loopholes in this promise. Chief among them is a disclaimer that information gleaned by or given to advertising banners on the site are not covered by the privacy policy. By placing a banner on a site, in fact, an advertiser can quietly insert its own cookie on the visitor's computer and follow the clickstream. If the banner encourages the visitor to fill his or her name and address on a sweepstakes form in the banner ad, the marketer now has an easy way to link the cookie to a real person with online and offline activities.

Privacy advocates have worried strenuously about the gathering of all sorts of data about individuals on the Web. They claim that although customer records always have been collected, the Web is unique because it makes it easy to connect information within and across databases and to use that data instantly. The concern that has resonated most with lawmakers is the possibility that youngsters using the Web might give up information about themselves and their families to marketers that their parents would not want disclosed. Congress responded to some of this concern about this leakage of family information when, in the 1998 Children's Online Privacy Protection Act, it ordered the Federal Trade Commission to regulate data collection on sites that target children under age 13. The Commission developed rules to ensure that Web sites get parents' permission before the sites request information from children under age 13 about themselves or their families. The FTC rules went into effect in April 2000.

FTC rules consider youngsters over 13 to be adults when it comes to the disclosure of information on the Web. We tried to zero in on what parents think of this notion and, in general, how they and youngsters differ in thinking about and dealing with information privacy.

Parents' Approach to Family Information Privacy

Parents' stance on treating youngsters 13 and over as adults on the Web comes through quite clearly in our survey: they don't agree. As noted at the beginning of the report, fully 96% of the parents interviewed believe that "teenagers should have to get their parent's consent before giving out information online." In fact, 84% of the parents agree "strongly" with the statement. Moreover, 60% of parents agree that they "worry more about what information a teenager would give away to a Web site than a younger child under 13."

These answers are part of a strong pattern of concern for information privacy that we found among most parents. Table 7 presents the percentages that agree or agree strongly with fifteen statements on the subject. Second on the list – just under the statement about requiring parents' consent – is parents' belief that they should have a legal right to know "everything" that a Web site knows about them; 95% agree, with 87% agreeing "strongly" with the statement.

Table 7: Percentage Of Parents Who "Agreed" Or "Agreed Strongly" to the Privacy Statements

	Total (N=1001)	Wary (n=375)	Cavalier (n=303)	Selectively Trusting (n=323)
Teenagers should have to get their parent's consent before giving out information online.	96	98#	91	98#
I should have a legal right to know everything that a Web site knows about me.	95	99#	89	97#
I am nervous about Web sites having information about me.	73	90#+	43	81#
I am more concerned about giving away sensitive information on-line than about giving away sensitive information any other way.	63	79#	29	79#
My concern about outsiders learning sensitive information about me and my family has increased since we've gone online at home.	59	82#+	22	66#
I worry more about what information a teenager would give away to a Web site than a younger child under 13 would.	61	63#	33	81*#
I look to see if a Web site has a privacy policy before answering any questions.	72	69	61	86*#
When I go to a Web site, it collects information about me even if I do not register or fill in information about myself.	54	64#	37	59#
Web site privacy policies are easy to understand.	41	18	50*	60*#
When a Web site has a privacy policy, I know that the site will take proper care of my information.	41	14	37*	76*#
I sometimes worry that members of my family give information they shouldn't about our family to Web sites.	36	46#	6	54#
I trust Web sites not to share information with other companies or advertisers when they say they won't.	37	7#	29	80*#
I like to give information to Web sites because I get offers for products and services I personally like.	18	5	14*	36*#
I will only give out information to a Web site if I am paid or compensated in some way.	9	3	5	21*#

(*) Notes that the percentage of respondents who agreed with this statement was significantly different form the group of "wary" parents.

(#) Notes that the percentage of respondents who agreed with this statement was significantly different form the group of "cavalier" parents.

(+) Notes that the percentage of respondents who agreed with this statement was significantly different form the group of "selectively trusting" parents.

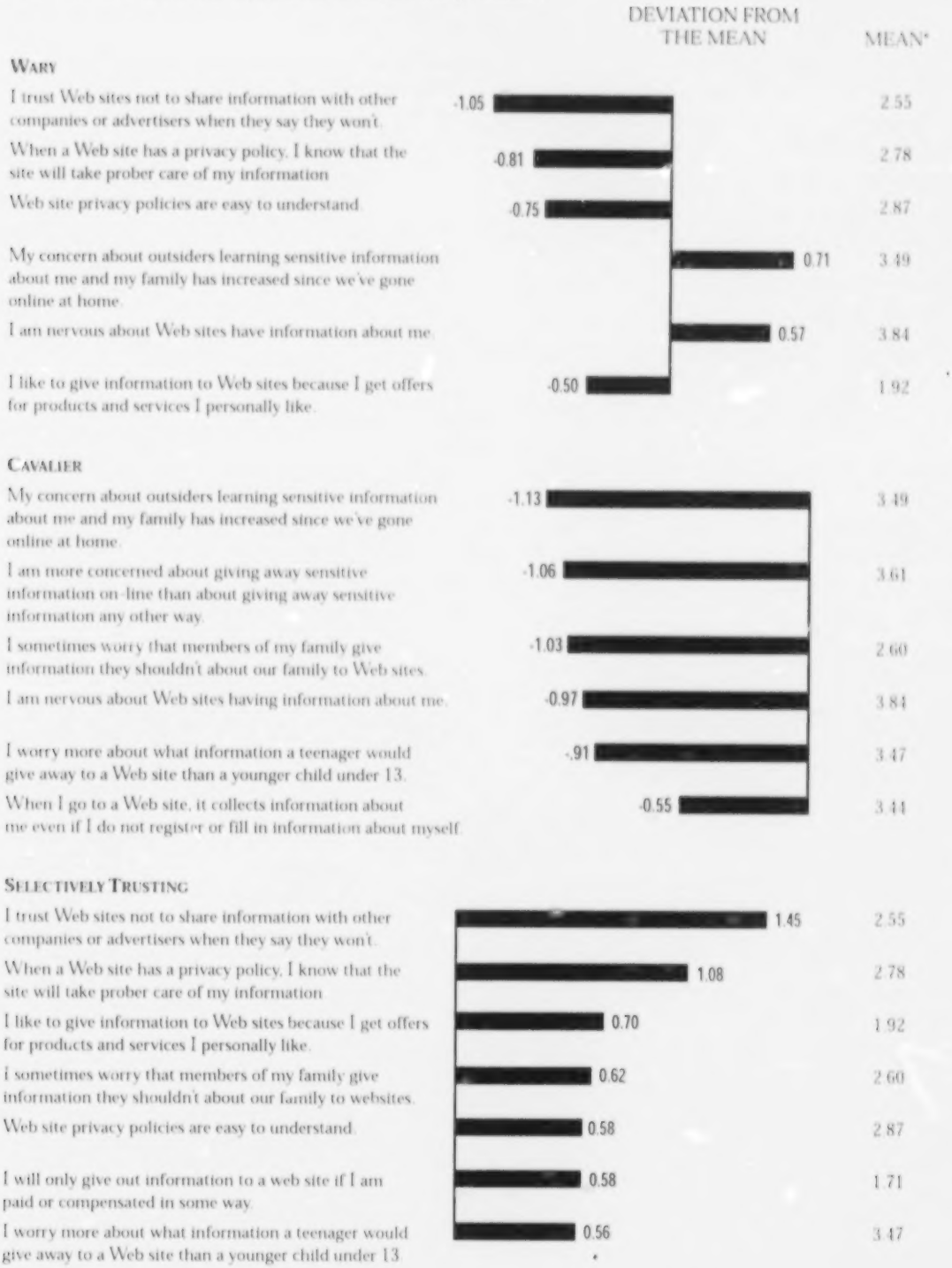
While the overwhelming number of parents agrees with these statements, there is a fair divergence in answers to the others. We used the computer technique called cluster analysis to discover if all the parents fit one profile in their answers or if there is diversity among them regarding their attitudes toward information privacy on the Web. The technique determines whether there are patterns among respondents in the extent to which certain statements deviate strongly from the average reply ("the mean"), based on a scale in which "agree strongly" is 5 and "disagree strongly" is 1. When the deviation from the mean of responses to a particular statement is strongly positive, it means that the people in the group agree or agree strongly with the statement more than most of the people in the sample. When the deviation from the mean of responses to a particular statement is strongly *negative*, it means that the people in the group disagree or disagree strongly with the statement more than most of the people in the sample.

As Chart 1 shows, we found three groups of parents with important differences in the way they state their attitudes toward family information privacy. We label the groups **wary, cavalier, and selectively trusting.**

- The wary make up 38% of the parents. They express a greater distrust of Web sites than the other two groups. It shows up in their stronger than average nervousness about Web sites having and sharing information about them; increased concern since going online that outsiders are learning sensitive information about them; disbelief that sites will adhere to privacy promises; and a sense that privacy policies are not easy to understand.
- The cavalier (30% of the parents) are much more likely than the others to reject specific concerns about Web privacy. They tend to disagree that since going online they have become more concerned about outsiders learning sensitive information about them; to dismiss worries about family members giving information to Web sites; and to deny worrying that a teen would give away more personal information on the Web compared to a child under age 13. Cavalier parents are also quite a bit less likely than wary and selectively trusting ones to know that web sites collect information about them even if they don't fill out information on the sites – a fact that perhaps suggests some naivete on the part of the Web cavaliers.
- The selectively trusting (32%) have characteristics of both groups. Like the wary, they have a higher than average concern about aspects of Web privacy – in their case, that family members might give away inappropriate information and that a teen would give away more information than a child under 13. Quite different from the wary, however, is the tendency of selectively trusting parents to say that Web sites' privacy policies are reliable and that sites will live up to their promises about not sharing information. Selectively trusting parents also stand apart from the other two groups in stating that they like to barter information for offers or compensation on the Web and in claiming that privacy policies are easy to understand.

Being wary, cavalier or selectively trusting has no association with a person's self-reported expertise with the Web, or with the amount of time the household has been online. We also found that these privacy clusters are unrelated to a parent's gender. Mothers are just as likely as fathers to report cavalier, wary, or selectively trusting attitudes toward Web privacy.

Chart 1: Groups of Parents Based on Their Privacy Views


DEVIATION FROM THE MEAN
MEAN*
WARY
I trust Web sites not to share information with other companies or advertisers when they say they won't.
-1.05
2.55
When a Web site has a privacy policy, I know that the site will take prober care of my information
-0.81
2.78
Web site privacy policies are easy to understand.
-0.75
2.87
My concern about outsiders learning sensitive information about me and my family has increased since we've gone online at home.
0.71
3.49
I am nervous about Web sites have information about me.
0.57
3.84
I like to give information to Web sites because I get offers for products and services I personally like.
-0.50
1.92
CAVALIER
My concern about outsiders learning sensitive information about me and my family has increased since we've gone online at home.
-1.13
3.49
I am more concerned about giving away sensitive information on-line than about giving away sensitive information any other way.
-1.06
3.61
I sometimes worry that members of my family give information they shouldn't about our family to Web sites.
-1.03
2.60
I am nervous about Web sites having information about me.
-0.97
3.84
I worry more about what information a teenager would give away to a Web site than a younger child under 13.
-.91
3.47
When I go to a Web site, it collects information about me even if I do not register or fill in information about myself.
-0.55
3.44
SELECTIVELY TRUSTING
I trust Web sites not to share information with other companies or advertisers when they say they won't.
1.45
2.55
When a Web site has a privacy policy, I know that the site will take prober care of my information
1.08
2.78
I like to give information to Web sites because I get offers for products and services I personally like.
0.70
1.92
I sometimes worry that members of my family give information they shouldn't about our family to websites.
0.62
2.60
Web site privacy policies are easy to understand.
0.58
2.87
I will only give out information to a web site if I am paid or compensated in some way.
0.58
1.71
I worry more about what information a teenager would give away to a Web site than a younger child under 13
0.56
3.47

* This is the mean (average) or responses to the statement by the entire sample of parents. See text

We noted, too, that concern about information privacy on the Web is not the same as general concern about the Web. When we examined the association between parents' Web attitude clusters – online worriers, disenchanteds and gung ho's – to these privacy clusters, we saw no statistically significant relationship between the two groups. It turns out that people who are worried, enthusiastic or disenchanted about the Web feel that way for reasons that may or may not include their opinions about information privacy on the Internet. They may, for example, be more or less concerned about Web violence, or more or less enthused about great learning sites.

Parents and Supervision Regarding Information

We did find statistically significant associations between the way parents talk about Web privacy (as seen in the clusters) and the ways they say they act or would act regarding their family's information. Wary parents respond differently from cavalier ones, and they in turn answer differently from those who are selectively trusting. At the same time, the pattern of answers suggests that the cavalier and selectively trusting parents are more conservative in their actions than their stated attitudes might predict.

Table 8 provides one illustration of this tendency. It presents parents' experiences and approaches to teaching their children about information privacy. We see that wary parents are more likely than others to say that they have had unhappy experiences with information loss through theft or children's release of data. Wary parents are also more likely to say they chose not to register for a Web site that wanted personal information and that they have not read a privacy policy.

Though these findings show statistically significant differences among these parent respondents, the table also reveals important similarities. Overall the reported experiences and actions of cavalier and selectively trusting parents reflect a caution about privacy that is not so very different from the caution that wary parents exhibit. Moreover, the groups are not statistically different on a number of key actions: buying something over the web (only half of even the cavalier parents have done it); reporting tension around issues of Web information (about 40% in all groups recall it); and saying they talked to their kids about how to deal with Web requests for information (nearly two thirds in each group say they have done it). The picture that emerges generally is that selectively trusting parents are more selective than their privacy attitudes suggest and that even the cavalier parents are really not so cavalier about giving out information or letting their children do it.

This picture is reinforced in the parents' responses to questions based on our two scenarios. We designed each scenario to place the parent in a situation that encouraged the exchange of information for a free, rather valuable "gift" from a favorite store. The scenarios became our major vehicles for comparing the parents' sensitivities with those of youngsters aged 10 to 17 on concrete instances of information exchange.

Table 8: Experiences Of Parents Regarding Information Privacy

	Total (N=1001)	Wary (n=376)	Cavalier (n=303)	Selectively Trusting (n=323)
Person or company used information about them in an improper way	10	15#+	5	10
Person or company used information about them in an improper way specifically on the Web	3	4	1	3
Had incident where parent was worried about something his/her child told both a telephone marketer	4	7+	3	2
Had incident where parent was worried about something his/her child told a Web site	5	5	3	5
Had incident where parent was worried about something his/her child told a telephone marketer and Web site	3	5	0.5*+	3
Generally reports tension over his/her child giving information to the Web[6]	41	44	38	40
Bought something over the Web	53	52	54	54
Never read a site's privacy policy	16	20#	13	14
Read a site's privacy policy one time to a few times	53	54	55	50
Read a site's privacy policy many times	24	19	25	29*
Doesn't know what a privacy policy is or whether read one	6	6	6	6
Registered on a Web site	41	38	41	44
Chose not to register on a Web site at least once because was asked for personal information	65	73	59*	62*
Talked with his/her child about how to deal with requests for information from Web sites	66	67	66	65

(*) Notes that the percentage of respondents who agreed with this statement was significantly different form the group of "wary" parents.

(#) Notes that the percentage of respondents who agreed with this statement was significantly different form the group of "cavalier" parents.

(+) Notes that the percentage of respondents who agreed with this statement was significantly different form the group of "selectively trusting" parents.

[6]We considered parents as having "experienced tension" with youngsters over kids' release of information to the Web if the parents answered any of four questions in specific ways. One question asked, "when it comes to chat rooms, or sending and receiving email, do you disagree with your children frequently, sometimes, rarely or never?" If the person said frequently or sometimes, we took that as a yes to having experienced tensions. The second question asked if the parent had ever been involved in a specific incident where the parent was worried about something that his or her child told a Web site. A third question asked "as far as you know, has any of your children been involved in a chat room or communicated with people you found unacceptable on the Web?" The fourth question asked, "Has any of your children ever given out information he or she shouldn't to Web sites?" We found that 41% of the parents answered yes to one or more of these questions.

SCENARIO 1:

The first scenario aimed to assess the tendency of the parents to say they would give out their name, address and other information under realistic conditions of a Web privacy policy considered standard in the industry. The scenario reflects what the industry-supported organization Privacy & American Business says "three out of four adult Web users" want before they give up personal information on the Web: a benefit, notice about how the firm will use their information, and an industry-accepted privacy policy.[7]

The interviewer posed the scenario in the following manner:

> I'd like you to pretend that you visit the Web site of your favorite store and see that you can earn a **great** free gift if you answer some questions. In order to get the free gift, you must give your name, home address, and answer some questions about what you like and don't like. The store clearly promises not to give out the names or home addresses of people who register for the free gift — but the store may give out answers to any of the other questions to other stores or advertisers.
>
> Would **you** answer these types of questions in return for a great free gift, or not?

If the parent said no or "it depends," the interviewer asked, "What if the product was worth $25?" A no to that led to a raising of the product's value to $50, then to $100.

Table 9 lists the initial answers of respondents as well as the percentage of total respondents who were ultimately swayed. Clearly, the wary parents were most immediately likely to say no (80%), followed by the cavalier (66%) and then the selectively trusting (56%). The somewhat higher tendency of selectively trusting parents to say *yes* or *it depends* rather than *no* probably relates to that group's greater-than-average belief in the truth of Web sites' privacy policies. In the final tally, 43% of selectively trusting parents were swayed to yes, compared to 33% of cavaliers and only 17% of the wary. In all 29% of the parents said that they would accept the offer of the free gift in exchange for identifying data and "other" information.

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[7] Alan F. Westin, "'Freebies' and Privacy: What Net Users Think," *Privacy & American Business Survey Report*, (July 14, 1999). http://www.pandfab.org/sr990714.html.

Table 9: Parents' Answers to Scenario 1

	Total (N=1001)	Wary (%)*	Cavalier (%)#	Selectively Trusting (%)+
Would you answer these types of questions in return for a great free product?				
Yes	18	9	21*	26*
No	68	80#+	66+	56
Depends on the product	4	4	3	4
Depends on the information they want	5	3	3	4
Depends on the product and information	4	2	4	7*
Don't know/No answer	2	3	2	2
Total additional parents who said "yes", if the product were worth $25, $50, or $100 (N=1001)	7	9	12	17*
Total who said yes** (N=1001)	29	17	33*	43*#

** The total is based on the accumulated number of parents who said yes to the offer, including those who said "no" or "depends" the first time. See text.

(*, #, +) Means that the percentage is different from the percentage in the column designated by the mark.

SCENARIO 2:

Our goal for the second scenario was to learn what kinds of specific personal and family information parents believe is acceptable for teens to give up to Web sites. We constructed fifteen items that varied along lines of relatively public and relatively private elements involving the teen or the family. For this scenario we left the privacy policy ambiguous. The interviewer said the following:

> Now (whether you currently have a teenaged child or not) suppose a Web site asked a teenager 13 to 17 years old to answer the following questions in order to get a great free gift. Do you think it is completely OK, OK, not OK or not at all OK for a teenager to give the following information to a Web site to get a free gift? If you are not sure, please just tell me.
>
> Please remember that we are not asking for you to answer these questions now - just to tell us if you think it is OK for a teenager to answer questions like these on a web site.

Parents' responses to the 15 items are ranked in Table 10 from the items that they feel are most OK to reveal to a Web site to those they feel are least OK. Overall, it appears that parents consider information about things parents or teens do out of the home and in public most acceptable to reveal. Knowledge about the teen's personal space, embarrassments or body are intermediate items, while disclosures about *parents'* personal space, embarrassments or body are least acceptable to reveal.

Table 10: Percentage of Parents Who Feel It Is "Completely OK" Or "OK" for Their Teenager to Give This Information to A Web Site, in Exchange For A Free Gift

	Total (N=1001)	Wary (n=375)	Cavalier (n=303)	Selectively Trusting (n=323)
Give out names of his or her favorite stores	44	38	43	52*#
Give out names of his or her parents' favorite stores	33	27	35*	38*
Give out whether his or her parents talk a lot about politics	25	20	28*	29*
Give out how many times his or her parents have gone to a place of worship in the past month	25	20	28*	29*
Give out whether he or she has skin problems	24	19	26	29*
Give out what types of cars the family owns	21	15	24*	27*
Give out what he or she does on the weekends	19	13	19	24*
Give out how many days of school he or she missed in the past year	19	12	22*	24*
Give out whether the family drinks wine or beer with dinner	17	13	21*	18
Give out how much allowance he or she gets	17	11	20*	21*
Give out whether he or she cheated in school during the past year	16	11	20*	17*
Give out whether his or her parents have skin problems	16	10	20*	18*
Give out whether his or her parents speed when they drive	14	12	17	14
Give out how many days of work his or her parent missed in the past year	10	7	13*	11
Give out what his parents do on the weekends	10	6	12*	12*

(*) Notes that the percentage of respondents who agreed with this statement was significantly different form the group of "wary" parents.

(#) Notes that the percentage of respondents who agreed with this statement was significantly different form the group of "cavalier" parents.

(+) Notes that the percentage of respondents who agreed with this statement was significantly different form the group of "selectively trusting" parents.

The privacy clusters roughly follow this arrangement and the pattern that we have seen previously. The wary are least likely to state that giving up the information is acceptable. The selectively trusting and cavalier dovetail each other in their somewhat more accepting responses, but in percentages that are quite a bit more conservative than their stated privacy attitudes would lead one to suspect. In fact, the average number of selectively trusting and cavalier parents who said it was acceptable to give up the personal and family information was 24% and 23%, respectively. These numbers are not all that different from the 21% "OK" rate in the sample as a whole, and not wildly different from the 16% average of the wary parents. Clearly, the great proportion of individuals in all three parent privacy groups found the notion of teenagers giving out virtually all of this information to Web sites highly problematic.

Statistical procedures allowed us to construct a *parents' information disclosure scale* that indicated the extent of a person's sensitivity to the release of information.[8] The higher a person's score, the more likely the person was to find it acceptable for a teen to release sensitive personal and family information. Curiously, we found no significant associations between sensitivity to information disclosure and a variety of characteristics, including parents' education, income, gender, expertise with the computer, and the length of time the household has been connected to the Web. We did find that the younger the parent, the more accepting he or she is to a child's disclosure of information. However, all of these characteristics (including age) taken together were not strong enough to comprise the major factors that predict parents' answers regarding teenagers' disclosure of information. Finding these predictors is a challenge for further research.[9]

[8] The parents' information disclosure scale was scaled from 15 different items in the data set. We employed principal components factor analysis, which is a test to assess whether the items belong to a single conceptual dimension. A principal components factor analysis of the 15 variables yielded a single factor, explaining 58.4% of the variance in responses. The 15 items were then examined for inter-item consistency, in unidimensional scaling (Cronbach's alpha=0.95). A scale of the 15 items, whose values represent the respondent's (parent) inclination to think it's OK for a teen to disclose private and sensitive information, was then computed. The higher the score, the more likely that respondent would say it's OK for a teen to disclose information. The scale mean across the total parents' sample (N=957) was 2.19, and the standard deviation was 0.82.

[9] We used multiple regression analysis here. We also attempted to find predictors of whether a parent would be swayed in the first scenario. Here too, we did not find demographics or Internet experiences to be strong

COMPARING KIDS AND PARENTS ON INFORMATION PRIVACY

Our interviews with the 10 to 17 year olds aimed to see if their attitudes toward privacy and their decisions in the scenarios are substantially different from those of parents.

We found a striking pattern: In the attitudes they express, youngsters seem quite concerned about protecting their information privacy and nervous about Web sites' having information about them. Yet when we give them specific opportunities to get a free gift in exchange for personal or family information, a much larger proportion of kids than parents are ready to do it. Their approach is the opposite of the tendency shown by the cavalier and selectively trusting parents. These parents often express relatively blasé attitudes toward information privacy but turn out to be quite conservative when confronted with the specific scenarios. By contrast, many of the youngsters express conservative general Web privacy attitudes but turn out to be quite liberal with their information when confronted with the scenarios.

Table 11: Parents' Vs. Kids' Agreement With Privacy Statements

	Parents (N = 1001) Agree		Kids (N = 304) Agree	
	Strongly (%)	Somewhat (%)	Strongly (%)	Somewhat (%)
Teenagers should have to get their parent's consent before giving out information online	84	12	60	19
I am nervous about Web sites having information about me	41	31	38	25
I look to see if a Web site has a privacy policy before answering any questions	50	19	50	23
I trust Web sites not to share information with other companies or advertisers when they say they won't	15	21	19	22
I like to give information to Web sites because I get offers for products and services I personally like	4	14	10	18

Because our time with the youngsters was much shorter than our time with the parents, we tapped into the kids' privacy attitudes using only five of the fourteen privacy statements we read to the parents. As Table 11 shows, more parents than kids express nervousness about Web sites holding information about them and agree that teens should have to get parents' permission before giving out information online. More parents than kids also disagree that they trust sites' promises about information and reject the notion that they like to give Web sites information in return for products and services. The higher parent percentages should not, however, obscure our finding that far more than half of the youngsters gave cautious answers that paralleled those of the parents.

Only 41% of the kids say they trust Web sites. 73% say they "look to see if a Web site has a privacy policy before answering any questions." 79% agree that teens should get parents' consent before giving out information online.

SCENARIOS 1 AND 2:

This aura of caution was much less evident in the responses many of the 10 to 17 year olds gave to the first scenario. The interviewer posed the situation in the same way it was posed to the parents. That led to the question, "Would you [give name, address and answer some other questions about what you like or don't like] in return for a great free gift, or not?" As with the parents, if the youngster said no or "it depends," the interviewer asked, "What if the product was worth $25?" A no to that led to a raising of the product's value to $50, then to $100.

Straight off, 22% of the youngsters said they would be swayed to exchange the information for a free gift. Recall from Table 9 that the proportion of parents who said they would be swayed was similar– 18%. (In fact, that difference is not statistically significant.) The real divergence between kids and parents came when the interviewer asked if the person would do it if the gift were worth different amounts of money. By $25, 30% of the kids had said yes to the initial offer or the offer that mentioned the cash value. By $50 the proportion was 38%, and by $100 it was 45%. With parents, the accumulated proportions saying yes at the $25, $50 and $100 offers were 21%, 24% and 29% respectively. (The differences between kids and parents *were* statistically significant at each of the money values.)

Table 12 lays out the initial and final results. As a result of the enticements, a total of 29% of parents and 45% of kids ended up saying they would exchange the information for a free gift. Part of the reason that the kids were attracted to the cash value more than the parents may be that their sense of a lot of money is different from that of adults. What parents may consider a relatively small amount for important information may seem like a gold mine to a youngster.

Table 12: Answers of Youngsters Age 10-17 to Scenario 1

Would you answer these types of questions in return for a great free product? (N=304)	(%)
Yes	22
No	63
Depends on the product	3
Depends on the information they want	4
Depends on the product and information	5
Don't know/No answer	3
Total additional kids who said "yes", if the product were worth $25, $50, or $100 (N = 304)*	23
Total who said yes (N = 304)	45

*The total is based on the accumulated number of youngsters who said yes to the offer, including those who said "no" or "depends" the first time. See text.

Fitting the pattern we have suggested, the youngsters who say the scenario would sway them nevertheless say they are concerned about privacy. On three of the privacy-attitude statements, they reveal the same strong level of caution about revealing personal information as the youngsters who would not be swayed. The same high percentages say they are nervous about Web sites knowing about them, agree that teens should have to get their parents' consent, and look for a privacy policy before answering any questions.

The two items on which the kids who would and would not barter information for a gift differ reflect a kind of enthusiasm combined with trust that begins to explain why many of the youngsters accepted the blandishment of scenario 1. 46% of the kids who say they would barter information for a gift agree that they like to go to Web sites because they get attractive offers, but only 16% of the kids who wouldn't barter said that. Similarly, 60% of the bartering group say they trust web sites to keep promises not to share information. Only 27% of those who wouldn't barter say that.

This interest in attractive offers certainly shows up in the way the kids who were swayed by the first scenario responded to scenario 2, as Table 13 shows. This "will barter" group, representing almost half of all kids, is willing to give up personal and family information in percentages far higher than the parents.

Table 13: Percentage Of Youngsters Saying It Is "OK" Or "Completely OK" For A Teenager To Give Out Information For A "Great Free Gift"

	Total Kids (N=304)	Will Barter[1] (n=136)[2]	Won't Barter (n=158)[2]	Parents (N=1001)
Give out names of his or her favorite stores	65#	82*	53	45
Give out the names of his or her parent's favorite stores	54#	70*	45	33
Give out what types of cars the family owns	44#	57*	34	22
Give out how much allowance he or she gets	39#	52*	30	17
Give out whether his or her parents talk a lot about politics	39#	51	31	26
Give out what he or she does on the weekends	39#	51*	32	18
Give out how many days of school he or she missed in the past year	35#	44*	27	18
Give out how many times his or her parents have gone to a place of worship in the past month	30	39*	23	25
Give out what his or her parent's do on the weekends	26#	36*	20	10
Give out whether he or she has skin problems	24	33*	20	24
Give out whether his or her parents speed when they drive	24#	33*	18	14
Give out whether the family drinks wine or beer with dinner	23#	31	18	16
Give out whether he or she cheated in school during the past year	22#	22	23	16
Give out how many days of work his or her parent missed in the past year	21#	28*	15	10
Give out whether his or her parents have skin problems	19	24	16	15

1 - "Will barter" are those who said they would accept the free gift in scenario 1. See text.
2 The percentages in the table do not include "no answer" or "don't know".
* Indicates a significant difference between the percentages of teens who agreed to the statement, in a comparison between "will barter" and "won't barter".
#- Indicates a significant difference between the percentage of teens and the percentage of parents who said it is "OK" or "completely OK" to give out information in exchange for a gift.

YOUNGSTERS' REPORTED EXPERIENCES WITH THE WEB

Perhaps not surprisingly, the "will barter" group is substantially more likely than the "won't barter" group to report giving personal information to a Web site, as Table 14 shows. Youngsters willing to barter are also less likely than their unwilling counterparts to say that they have spoken with their parents about how to deal with Web requests for information. In addition, the table shows that "barter-willing" youngsters are less likely to believe that their parents trust them "completely" to do the right thing on the Web.

Table 14: Experiences Of Youngsters Regarding Information Privacy

	Total Kids	Will Barter[1]		Gender		Age	
		Yes	No	Boys	Girls	10-12	13-17
	(N=304)	(n=136)[2]	(n=158)[2]	(n=145)	(n=158)	(n=101)	(n=203)
Never read a site's privacy policy	25	23	26	28	22	36	19*
Read a site's privacy policy one time to a few times	42	44	40	42	41	29	44*
Read a site's privacy policy many times	25	14	17	15	17	7	20*
Doesn't know what a privacy policy is or whether read one	19	19	17	14	18	27	12*
Has given information to a Web site about self	31	40	24*	32	31	16	39*
Say parents trust them completely to do the right thing when it comes to using the Internet	69	60	77*	69	69	74	63
Say parents trust them some or a little to do the right thing when it comes to using the Internet	28	37	20*	25	30	23	34
Talked to parents about how to deal with requests for information on the Web	69	62	75*	63	75*	67	70
Experience tension with parents over giving information to Web	36	39	34	35	37	34	37

1 - "Will barter" are those who said they would accept the free gift in scenario 1. See text.

2 - These are valid responses, the percentages in the table do not include "no answer" or "don't know".

* Indicates that the percentage difference is statistically significant from the percentages of the corresponding category in that variable (will barter vs. won't barter, boys vs. girls, young vs. old children).

At the same time, the barter willing and unwilling groups do not differ when it comes to reporting tensions with parents over information. Overall, 36% of youngsters aged 10-17 report that they have experienced tension -- that is, that they have disagreed with their parents frequently or sometimes over what they say in chat rooms or email, or that they have gotten their parents angry at them for giving out information elsewhere on the Web that their parents considered inappropriate. As Table 14 indicates, this number is consistent not only with respect to the barter groups

but also when it comes to gender and age. Girls, boys, older children and younger children do not differ in reporting tensions with their parents over giving information to the Web.[10]

In general, gender does not associate with many of answers that the youngsters gave about their experiences with the Web. Girls *are* somewhat more likely than boys to say they have talked to their parents about how to deal with Web requests for information. In the case of other reported activities and knowledge about the Web- including their level of expertise- boys and girls have the same confidence level.

When it comes to information-privacy attitudes and the scenarios, however, girls are quite different from boys. Girls are less likely than boys to say they would barter their name, address and information about tastes for a free gift worth up to $100. 39% of the girls are barter-willing compared to 54% of the boys. Similarly, as Table 15 shows, boys are substantially more willing than girls when answering scenario 2 to say they would give out certain types of family or personal information for a free gift. Gender also makes a difference when it comes to trusting Web sites "not to share information" with other firms. Half of the boys agree that they can trust Web sites, while only 35% of the girls accept the proposition.

[10] We considered youngsters as having "experienced tension" with parents over releasing information to the Web if they answered either of two questions in specific ways. One question asked, "when it comes to chat rooms, or sending and receiving email, do you disagree with your parents frequently (that is, a lot), sometimes, rarely (that is, not too much) or never?" If the person said frequently or sometimes, we considered him or her as having experienced tensions. The second question asked, "Have your parents ever been angry at you for giving information to a Web site that you shouldn't have given?" If the youngster said yes to that, we considered him or her as having experienced tensions.

Table 15: Percentage Of Youngsters Saying It Is "OK" Or "Completely OK" For A Teenager To Give Out Information For A "Great Free Gift"

	Total Kids	Gender		Age		Total Parents
		Girls	Boys	10-12	13-17	
	(N=304)	(n=158)	(n=145)	(n=101)	(n=203)	(N=1001)
Give out names of his or her favorite stores	65#	60	71*	51	72*	45
Give out the names of his or her parent's favorite stores	54#	48	58	43	59*	33
Give out what types of cars the family owns	44#	37	53*	37	48	22
Give out how much allowance he or she gets	39#	33	46*	27	45*	17
Give out whether his or her parents talk a lot about politics	39#	33	45	17	49*	26
Give out what he or she does on the weekends	39#	35	43	29	44*	18
Give out how many days of school he or she missed in the past year	35#	29	41*	30	37	18
Give out how many times his or her parents have gone to a place of worship in the past month	30	26	34	21	34*	25
Give out what his or her parent's do on the weekends	26#	23	30	18	31*	10
Give out whether he or she has skin problems	24	23	26	11	31*	24
Give out whether his or her parents speed when they drive	24#	23	26	11	31*	14
Give out whether the family drinks wine or beer with dinner	23#	22	25	16	27*	16
Give out whether he or she cheated in school during the past year	22#	20	24	12	27	16
Give out how many days of work his or her parent missed in the past year	21#	19	23	17	23	10
Give out whether his or her parents have skin problems	19	23	25	11	31*	15

* Means that the percentage difference is statistically significant from the percentages of the corresponding category in that variable (boys vs. girls and young vs. old teens).
# Means that the percentage difference is statistically significant from the percentage of parents who agreed to that statement.

We found no link between age and gender in the answers the youngsters gave. Age alone, however, was more consistently associated than gender with Web experiences as well as with attitudes toward giving up sensitive information.

Table 14 shows that kids age 13-17 are more likely than tweens to say they have read a privacy site and to have given personal information to the Web. Table 15 shows that young age was consistently, and often strongly, associated with accepting the release of personal and family information in scenario 2. Kids 13-17 were far more likely to say it was OK to disclose the answers to 11 of the 15 statements presented to them in exchange for a free gift. Through a different type of analysis, we learned that the higher the age of the youngster (from 10 to 17), the more likely he or she

would be to say it is OK to give out personal and family information as measured in a *kid information disclosure scale* that we constructed from the 15 statements.[11]

Table 15 suggests that on several responses 10-12 year olds are often as cautious as parents regarding personal and family information. Federal regulations refer to these children and younger ones when requiring a Web site to get parental permission when wanting to ask for, or track, information about a youngster. Ironically, though, it is the older kids, the ones who are fair game for Web sites, who are far more likely than parents to give up the kinds of information the parents would not want released.

Although we found rather strong associations between age and the answers to scenario 2, we found no relationship between age and a willingness to give up name, address and information about likes and dislikes as described in the first scenario. The reason is probably not the clearer mention of a privacy policy in scenario 1 than 2, because we found no difference between the age groups in the trust of privacy policies. Perhaps younger children consider topics such as whether their parents drink wine, what they do on weekends, and whether they cheat on tests to be more obviously sensitive than giving out one's name and address to a Web site. Moreover, both parent and child respondents may have thought that somehow the Web site could find out their names and addresses and associate them with scenario 2's answers.

Despite the basic associations we found between age and a youngster's sensitivity to releasing information, more complex regression analyses revealed the same frustrating lack of predictability that we found with parents. We failed to find any background or attitudinal characteristic- whether age, gender, attitudes toward Web privacy, or any details regarding the child's attitude or experience- that could statistically predict answers on either scenarios 1 or 2. What this means is that while we have found some key associations between age and a youngster's privacy attitude as well as between gender and a kid's privacy attitude, trying to get at the cluster of attitudes and background characteristics that can together predict a youngster's (or parent's) response to information-privacy scenarios remains a challenge.

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[11] Like the parents' scale, the kids' information disclosure scale was created from 15 different items in the data set. We employed principal components factor analysis, which is a test to assess whether the items belong to a single conceptual dimension. A principal components factor analysis of the 15 variables yielded two factors, explaining 58.9% of the variance in responses. A closer examination of the two items revealed they were equally correlated with the main dimension, and therefore they were not omitted from the scale. The 15 items were then examined for inter-item consistency, in unidimensional scaling (Cronbach's alpha=0.92). A scale of the 15 items, whose values represent the respondent's (kid's) inclination to disclose private and sensitive information, was then computed. None of the items if deleted would have improved the alpha reliability coefficient. The higher the score, the more likely that respondent would disclose information. The scale mean across the total kids' sample (N=290) was 2.66, and the standard deviation was 0.80.

Parent-child communication and the Web

The findings we have reported for our entire sample of 300 youngsters held up when we looked at the 150 in this group whose parents we also interviewed. While the larger sample of kids was generally more useful to test for statistical associations, the linked pairs of parents and children allowed us to see specifically if youngsters and parents tended to be on the same page when they spoke about information privacy and the Web.

When we interviewed pairs of parents and kids in the same family, we found chance rather than pattern in key communication areas. We found that kids and their parents don't necessarily hold the same attitudes or even remember the same family interactions.

- It was only a matter of chance that the parents and the kids who said they would barter information for free gifts in scenarios 1 and 2 were related.
- Whether parents agreed with their kids on whether they trusted them "completely" was also merely a matter of chance.
- Similarly, although over 60% of all the parents and kids we interviewed (including the youngsters who were open to information barter) said that they have had discussions about how to deal with Web information requests, we found in our pairs that most parents and kids didn't agree on whether these sorts of discussions had ever taken place!

The findings are sobering for those who believe that simple discussions between parents and their children can encourage a consistent family approach to dealing with requests for information on the Web. They suggest that parent-child conversations about Web privacy issues are fleeting at best, perhaps in the form of "don't give out your name" or "don't talk to strangers" that parents have traditionally urged upon their children. In view of the chance relationships between youngsters' and parents' approach to bartering information, it would seem that parent-child communication about family privacy policies is an area that deserves a great deal of attention.

CONCLUDING REMARKS

If there is one point that our study highlights it is that many- in fact, probably most- American families are filled with contradictions when it comes to the Internet. Parents fear that it can harm their kids but feel that their kids need it. Parents and kids individually say they have talked to each other about giving out information over the Web, but parents and kids in the same family don't remember doing it. Kids agree that parents should have a say on the information they give out over the Web but nevertheless find it acceptable to give out sensitive personal and family information to Web sites in exchange for a valuable free gift.

It should not be surprising that these sorts of contradictions lead to tensions. This year's Annenberg report on the Internet and the Family has focused on the contradictions and tensions surrounding the release of family information. We have found that three out of four parents say they are concerned that their children "give out personal information about themselves when visiting Web sites or chat rooms." Smaller, though still quite substantial, proportions of parents and youngsters report having experienced at least some incidents of disagreement, worry or anger in the family over kids' release of information to the Web. The proportions of families feeling such tensions will likely grow in coming years as new technologies for learning about individuals proliferate on the Internet. For media and marketers, information about teens is an increasingly valuable commodity. For logical business reasons they will pursue knowledge about youngsters and their families as aggressively as possible.

The task for civic society is to set up a counterbalance to their efforts that establishes norms about what is ethically and legally correct for media and marketers to do. We might note here that Federal and university research guidelines require academic investigators to get parents' permission to interview tweens and teens about something as benign as their general attitudes toward the Web. It is ironic that marketers can track, aggregate and store far more personal responses to questions by individuals in these age groups without getting any permission from parents at all.

Nevertheless, while one can agree (as almost all parents do) that teenagers should get permission from parents before giving information to sites, legislation that forces Web sites to get that permission raises complex issues. A clear drawback is that mandating Web sites to get parental permission from youngsters age 10 to 17 is impractical in an era when youngsters can discover ways to get around such requirements or forge their parents' permission.

Even if it becomes possible for a site to verify whether a visitor is or is not a teen, we have to question whether this sort of verification is socially desirable. What might be the consequences of the "electronic carding" of tweens and teens? Would many Web sites simply prohibit teens from entering rather than go to the trouble to turn off their tracking and profiling software for them? More controversially, would it mean that teens could not participate in chat rooms or listservs where information about users is systematically collected? If so, would that be infringing on the right of the youngsters to express their opinions in open forums?

Clearly, the new digital technologies are creating circumstances where society's interest in encouraging parents to supervise their youngsters is colliding with society's interest in encouraging youngsters' to speak out and participate in public discussions. We hesitate to suggest that the FTC rules that guide Web sites regarding children under 13 should be applied to youngsters 13 and over. At the same time, we reject the notion that teens should be approachable by Web sites as if they are fully responsible and independent adults in need of no parental supervision. We believe that the best policy in this area lies in aggressively encouraging family discussions of privacy norms along with limited Federal regulation.

- Our study points to the importance of urging parents and their children to talk in detail about how to approach requests by Web sites for personal and family data. Parents should not take for granted that traditional cautions such as "don't give out your name" or "don't talk to strangers" will be enough for the Web. Family members need to understand how all sorts of information about their interests can be tracked through cookies and related software without their even knowing it.
- Many parents cannot develop norms about family privacy alone. Our study and others have found that parents simply do not know enough about the Web to be aware of the way Web sites gather information and what to do about it. Here is a terrific opportunity for community groups, libraries, schools, and state and Federal agencies to work together on campaigns aimed at making information privacy a hot family topic and bringing community members together to learn about it.
- One way to get family members talking about these issues when children are relatively young (say, aged 6 through 12) is to convince parents and kids to surf the Web together. Encouraging family Web surfing, and family discussions about Web surfing, ought to be a priority of government and nonprofit organizations that care about enriching Americans' Internet experiences.
- Logically connected to encouraging community and family discussions of information privacy is the need for individuals to know what Web sites know about them. Our research shows that virtually all parents believe that they should have a legal right to that information. A Web Freedom of Information Act should be passed that allows every person access to all data, including clickstream data, that a Web site connects to his or her individual computer or name. Whether parents should have the right to access their youngsters' data should be a mater of public discussion.
- Our finding that youngsters are substantially more likely than parents to give up personal information to a Web site when increasing values are associated with a free gift supports suggestions for another Federal regulation: Web sites aimed at tweens and teens should be prohibited from offering free gifts, including prizes through sweepstakes, if those gifts are tied in direct or indirect ways to the youngsters' disclosure of information.

We fully expect that some of these suggestions will be more controversial than others. All of them will take a lot of work. But then, it will take a lot of work from many quarters of society to help maximize the benefits of the Internet for the family.

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